



Analytical Laboratory

Analytical Laboratory
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13339 Hagers Ferry Road
Huntersville, NC 28078-7929
McGuire Nuclear Complex - MG03A2
Phone: 980-875-5245 Fax: 980-875-4349

Order Summary Report

Order Number: J10090197

Project Name: FGD - Test Burn Daily

Customer Name(s): Don Scruggs, Robbin Jolly, Ray Lidke, Bill Kennedy

Customer Address: 253 Plant Allen Road

Belmont, NC 28012

Lab Contact: Jason C Perkins

Phone: 980-875-5348

Report Authorized By:
(Signature)

Date: 11/12/2010

Program Comments:

Sampled 10/8/2010

Data Flags & Calculations:

Any analytical tests or individual analytes within a test flagged with an "X" or "1" indicate a deviation from the method quality system or quality control requirement. All results are reported on a dry weight basis unless otherwise noted.

Data Package:

This data package includes analytical results that are applicable only to the samples described in this narrative. An estimation of the uncertainty of measurement for the results in the report is available upon request. This report shall not be reproduced, except in full, without the written consent of the Analytical Laboratory. Please contact the Analytical laboratory with any questions. The order of individual sections within this report is as follows:

Job Summary Report, Sample Identification, Technical Validation of Data Package, Analytical Laboratory Certificate of Analysis, Analytical Laboratory QC Reports, Sub-contracted Laboratory Results, Customer Specific Data Sheets, Reports & Documentation, Customer Database Entries, Test Case Narratives, Chain of Custody (COC)

Certification:

The Analytical Laboratory holds the following State Certifications : North Carolina (DENR) Certificate #248, South Carolina (DHEC) Laboratory ID # 99005. Contact the Analytical Laboratory for definitive information about the certification status of specific methods.

Sample ID's & Descriptions:

Sample ID	Plant/Station	Collection Date and Time	Collected By	Sample Description
2010008606	ALLEN	08-Oct-10 10:18 AM	Jeff Womack	FGD Purge Eff
2010008607	ALLEN	08-Oct-10 9:37 AM	Jeremy D.	EQ Tank Eff
2010008608	ALLEN	08-Oct-10 9:51 AM	Jeremy D.	BioReactor 1 Inf
2010008609	ALLEN	08-Oct-10 9:50 AM	Jeff Womack	BioReactor 2 Inf
2010008610	ALLEN	08-Oct-10 9:42 AM	Jeremy D.	BioReactor 2 Eff
5 Total Samples				

Technical Validation Review

Checklist:

COC and .pdf report are in agreement with sample totals and analyses (compliance programs and procedures).

☒ Yes

☐ No

All Results are less than the laboratory reporting limits.

☐ Yes

☒ No

All laboratory QA/QC requirements are acceptable.

☒ Yes

☐ No

The Vendor Laboratories have been qualified by the Analytical Laboratory

Yes

Report Sections Included:

☒ Job Summary Report

☒ Sample Identification

☒ Technical Validation of Data Package

☒ Analytical Laboratory Certificate of Analysis

☐ Analytical Laboratory QC Report

☒ Sub-contracted Laboratory Results

☐ Customer Specific Data Sheets, Reports, & Documentation

☐ Customer Database Entries

☐ Test Case Narratives

☒ Chain of Custody

☐ Electronic Data Deliverable (EDD) Sent Separately

Reviewed By: Jenny A Herman

Date: 11/12/2010

Certificate of Laboratory Analysis*This report shall not be reproduced, except in full.***Order # J10090197**Site: FGD Purge Eff
Collection Date: 08-Oct-10 10:18 AMSample #: **2010008606**
Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	Method	Analysis Date/Time	Analyst
<u>MERCURY (COLD VAPOR) IN WATER</u>							
Mercury (Hg)	41.0	ug/L		2.5	EPA 245.1	18-Oct-10 11:01	TLINN
<u>TOTAL RECOVERABLE METALS BY ICP</u>							
Boron (B)	181	mg/L		0.5	SW 6010	18-Oct-10 13:09	MHH7131
<u>DISSOLVED METALS BY ICP-MS</u>							
Selenium (Se)	281	ug/L		5	EPA 200.8	19-Oct-10 13:12	KRICHAR
<u>TOTAL RECOVERABLE METALS BY ICP-MS</u>							
Arsenic (As)	124	ug/L		10	EPA 200.8	29-Oct-10 13:29	KRICHAR
Chromium (Cr)	122	ug/L		10	EPA 200.8	29-Oct-10 13:29	KRICHAR
Copper (Cu)	139	ug/L		10	EPA 200.8	29-Oct-10 13:29	KRICHAR
Nickel (Ni)	256	ug/L		10	EPA 200.8	29-Oct-10 13:29	KRICHAR
Selenium (Se)	849	ug/L		10	EPA 200.8	29-Oct-10 13:29	KRICHAR
Silver (Ag)	< 10	ug/L		10	EPA 200.8	29-Oct-10 13:29	KRICHAR
Zinc (Zn)	428	ug/L		20	EPA 200.8	29-Oct-10 13:29	KRICHAR
<u>TOTAL DISSOLVED SOLIDS</u>							
Vendor Parameter	Complete				V_PRISM		

Site: EQ Tank Eff
Collection Date: 08-Oct-10 9:37 AMSample #: **2010008607**
Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	Method	Analysis Date/Time	Analyst
<u>MERCURY (COLD VAPOR) IN WATER</u>							
Mercury (Hg)	28.0	ug/L		2.5	EPA 245.1	18-Oct-10 11:03	TLINN
<u>TOTAL RECOVERABLE METALS BY ICP</u>							
Boron (B)	130	mg/L		0.5	SW 6010	18-Oct-10 13:13	MHH7131
<u>DISSOLVED METALS BY ICP-MS</u>							
Selenium (Se)	405	ug/L		5	EPA 200.8	19-Oct-10 13:16	KRICHAR
<u>TOTAL RECOVERABLE METALS BY ICP-MS</u>							
Arsenic (As)	103	ug/L		10	EPA 200.8	29-Oct-10 13:34	KRICHAR
Chromium (Cr)	102	ug/L		10	EPA 200.8	29-Oct-10 13:34	KRICHAR
Copper (Cu)	116	ug/L		10	EPA 200.8	29-Oct-10 13:34	KRICHAR
Nickel (Ni)	206	ug/L		10	EPA 200.8	29-Oct-10 13:34	KRICHAR
Selenium (Se)	800	ug/L		10	EPA 200.8	29-Oct-10 13:34	KRICHAR
Silver (Ag)	< 10	ug/L		10	EPA 200.8	29-Oct-10 13:34	KRICHAR
Zinc (Zn)	339	ug/L		20	EPA 200.8	29-Oct-10 13:34	KRICHAR

Certificate of Laboratory Analysis

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Order # J10090197

Site: BioReactor 1 Inf
Collection Date: 08-Oct-10 9:51 AM

Sample #: 2010008608
Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	Method	Analysis Date/Time	Analyst
<u>TOTAL RECOVERABLE METALS BY ICP</u>							
Boron (B)	84.4	mg/L		0.5	SW 6010	18-Oct-10 13:17	MHH7131
<u>DISSOLVED METALS BY ICP-MS</u>							
Selenium (Se)	659	ug/L		5	EPA 200.8	19-Oct-10 13:19	KRICHAR
<u>TOTAL RECOVERABLE METALS BY ICP-MS</u>							
Arsenic (As)	< 10	ug/L		10	EPA 200.8	10-Nov-10 12:10	KRICHAR
Chromium (Cr)	< 10	ug/L		10	EPA 200.8	10-Nov-10 12:10	KRICHAR
Copper (Cu)	< 10	ug/L		10	EPA 200.8	10-Nov-10 12:10	KRICHAR
Nickel (Ni)	12.7	ug/L		10	EPA 200.8	10-Nov-10 12:10	KRICHAR
Selenium (Se)	711	ug/L		10	EPA 200.8	10-Nov-10 12:10	KRICHAR
Silver (Ag)	< 10	ug/L		10	EPA 200.8	10-Nov-10 12:10	KRICHAR
Zinc (Zn)	< 20	ug/L		20	EPA 200.8	10-Nov-10 12:10	KRICHAR

Site: BioReactor 2 Inf
Collection Date: 08-Oct-10 9:50 AM

Sample #: 2010008609
Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	Method	Analysis Date/Time	Analyst
<u>TOTAL RECOVERABLE METALS BY ICP</u>							
Boron (B)	66.3	mg/L		0.5	SW 6010	18-Oct-10 13:49	MHH7131
<u>TOTAL RECOVERABLE METALS BY ICP-MS</u>							
Arsenic (As)	< 10	ug/L		10	EPA 200.8	29-Oct-10 13:44	KRICHAR
Chromium (Cr)	< 10	ug/L		10	EPA 200.8	29-Oct-10 13:44	KRICHAR
Copper (Cu)	< 10	ug/L		10	EPA 200.8	29-Oct-10 13:44	KRICHAR
Nickel (Ni)	< 10	ug/L		10	EPA 200.8	29-Oct-10 13:44	KRICHAR
Selenium (Se)	42.8	ug/L		10	EPA 200.8	29-Oct-10 13:44	KRICHAR
Silver (Ag)	< 10	ug/L		10	EPA 200.8	29-Oct-10 13:44	KRICHAR
Zinc (Zn)	< 20	ug/L		20	EPA 200.8	29-Oct-10 13:44	KRICHAR

Site: BioReactor 2 Eff
Collection Date: 08-Oct-10 9:42 AM

Sample #: 2010008610
Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	Method	Analysis Date/Time	Analyst
<u>MERCURY (COLD VAPOR) IN WATER</u>							
Mercury (Hg)	< 1	ug/L		1	EPA 245.1	18-Oct-10 11:06	TLINN
<u>TOTAL RECOVERABLE METALS BY ICP</u>							
Boron (B)	68.6	mg/L		0.5	SW 6010	18-Oct-10 13:53	MHH7131
<u>TOTAL RECOVERABLE METALS BY ICP-MS</u>							
Arsenic (As)	< 10	ug/L		10	EPA 200.8	10-Nov-10 12:15	KRICHAR

Certificate of Laboratory Analysis

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Order # J10090197

Chromium (Cr)	< 10	ug/L	10	EPA 200.8	10-Nov-10 12:15	KRICHAR
Copper (Cu)	< 10	ug/L	10	EPA 200.8	10-Nov-10 12:15	KRICHAR
Nickel (Ni)	< 10	ug/L	10	EPA 200.8	10-Nov-10 12:15	KRICHAR
Selenium (Se)	< 10	ug/L	10	EPA 200.8	10-Nov-10 12:15	KRICHAR
Silver (Ag)	< 10	ug/L	10	EPA 200.8	10-Nov-10 12:15	KRICHAR
Zinc (Zn)	< 20	ug/L	20	EPA 200.8	10-Nov-10 12:15	KRICHAR



Full-Service Analytical &
Environmental Solutions

NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert No. 37735

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Case Narrative

10/20/2010

Duke Energy Corporation
Jay Perkins
13339 Hagers Ferry Road
Huntersville, NC 28078

Project: Allen - FGD Alternative Fuels Test Burn #1 Daily
Project No.: J10090197
Lab Submittal Date: 10/12/2010
Prism Work Order: 0100340

This data package contains the analytical results for the project identified above and includes a Case Narrative, Sample Results and Chain of Custody. Unless otherwise noted, all samples were received in acceptable condition and processed according to the referenced methods.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative.

Please call if you have any questions relating to this analytical report.

Respectfully,

PRISM LABORATORIES, INC.

VP Laboratory Services

Reviewed By

Data Qualifiers Key Reference:

BRL	Below Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
*	Results reported to the reporting limit. All other results are reported to the MDL with values between MDL and reporting limit indicated with a J.

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449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543
Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received
2010008606/FGD Purge EFF	0100340-01	Water	10/08/10	10/12/10

Samples received in good condition at 2.7 degrees C unless otherwise noted.



Duke Energy Corporation
Attn: Jay Perkins
13339 Hagers Ferry Road
Huntersville, NC 28078

Project: Allen - FGD Alternative Fuels
Test Burn #1 Daily
Project No.: J10090197
Sample Matrix: Water

Client Sample ID: 2010008606/FGD Purge E
Prism Sample ID: 0100340-01
Prism Work Order: 0100340
Time Collected: 10/08/10 10:18
Time Submitted: 10/12/10 16:30

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
General Chemistry Parameters									
Total Dissolved Solids	9100	mg/L	50	8.7	1	*SM2540 C	10/13/10 13:15	JAB	P0J0269



Duke Energy Corporation
Attn: Jay Perkins
13339 Hagers Ferry Road
Huntersville, NC 28078

Project: Allen - FGD Alternative Fuels
Test Burn #1 Daily
Project No: J10090197

Prism Work Order: 0100340
Time Submitted: 10/12/10 4:30:00PM

General Chemistry Parameters - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0J0269 - NO PREP										
Blank (P0J0269-BLK1)				Prepared & Analyzed: 10/13/10						
Total Dissolved Solids	BRL	50	mg/L							
LCS (P0J0269-BS1)				Prepared & Analyzed: 10/13/10						
Total Dissolved Solids	984	50	mg/L	1000		98	90-110			

Sample Extraction Data

NO PREP				
Lab Number	Batch	Initial	Final	Date
0100340-01	P0J0269	50 mL	50 mL	10/13/10

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

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#4



Duke Energy Analytical Laboratory
Mail Code MGO3A2 (Building 7405)
13339 Hagers Ferry Rd
Huntersville, N. C. 28078
(704) 875-5245
Fax: (704) 875-4349

Analytical Laboratory Use Only

ORDER# J10090197	MATRIX: OTHER	Samples Originating From	NC SC
Logged By: CPK	Date & Time: 9/29/10	SAMPLE PROGRAM	Ground NPOES
Vendor	3.3 (10/12/10) Cooler Temp (C)	Water	Drinking Water UST
Vendor: PRISM PO# ISW01.1913	10 Preserv.: 1=HCL 2=H ₂ SO ₄ 3=HNO ₃ 4=Ice 5=None	RCRA Waste	

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DISTRIBUTION
ORIGINAL to LAB,
COPY to CLIENT

Customer must Complete

1) Project Name Allen - FGD Alternative Fuels Test Burn # 1 - Daily	2) Phone No:
2) Client: Don Scruggs, Robbin Jolly, Ray Lidke, Bill Kennedy	4) Fax No:
5) Business Unit:	6) Process:
8) Oper. Unit:	10) Resp. Center:
	Mail Code:
	9) Res. Type:

LAB USE ONLY
"Lab ID
2010008606
2010008607
2010008608
2010008609
2010008610
2010008611
2010008612

Customer to complete appropriate columns to right

Se Speciation Bottle ID	13 Sample Description or ID	Date	Time	Signature	17 Comp.	18 Grab	TDS (PRISM)	Hg - 245.1	Metals*	Se, soluble
(01)	FGD Purge Eff	10/8	1018	JEFF Womack			1	1	1	1
	EQ Tank Eff.	10/8	0937	Jeremy Doreen			1	1	1	1
	BioReactor 1 Inf	10/8	0951	Jeremy Doreen					1	1
	BioReactor 2 Inf	10/8	0950	JEFF Womack					1	
	BioReactor 2 Eff	10/8	0942	Jeremy Doreen			1	1		
	Filter Bk	9/30	1050	J Davis						
	Metals Trip Bk	9/30	1050	J Davis						

Customer to sign & date below - fill out from left to right.

1) Relinquished By: [Signature]	Date/Time: 10/11/10 11:00	2) Accepted By: [Signature]	Date/Time: 10/11/10 11:00
3) Relinquished By: [Signature]	Date/Time: 10/11/10 1605	4) Accepted By: [Signature]	Date/Time: 10/11/10 1605
5) Relinquished By: [Signature]	Date/Time: 10-12-10 1540	6) Accepted By: [Signature]	Date/Time: 10-12-10 1540
7) Relinquished By: [Signature]	Date/Time: 10-12-10 1630	8) Accepted By: [Signature]	Date/Time: 10-12-10 1630
9) Seal/Locked By: [Signature]	Date/Time: 10/12/10 e 1630	10) Seal/Lock Opened By: [Signature]	Date/Time: 10/12/10 e 1630
11) Seal/Locked By: [Signature]	Date/Time: 10/12/10 e 1630	12) Seal/Lock Opened By: [Signature]	Date/Time: 10/12/10 e 1630
Comments: * Metals=As, Ag, B, Cu, Cr, Ni, Se, Zn			

Customer, IMPORTANT!
Please indicate desired turnaround.

2.7
10-21
0100340

#4

